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(54) Title: PREPARATION OF CATALYST COMPOSITIONS HAVING IMPROVED ACTIVITY

(57) Abstract: The present invention relates to a process for preparing a catalyst composition for olefin polymerization, which comprises preparing a catalyst solid in a first step by bringing A) at least one support, B) at least one organic compound having at least one functional group containing active hydrogen, C) at least one organometallic compound and D) at least one organic transition metal compound into contact with one another, then bringing this catalyst solid into contact with E) at least one organoaluminum compound in a second step and then using this mixture for the polymerization without further work-up. In addition, the invention relates to catalyst system for the polymerization of olefins which comprise such catalyst compositions, to the use of the catalyst compositions or the catalyst systems for the polymerization of olefins and to a process of the polymerization of olefins.